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tute). Special attention is paid techniques and to the analysis of reliability and completeness of the radio-observation data. The results of measurements of meteor velocities made at Khar'kov at a wavelength of 8 meters during a three year period are discussed. The data include results of measurements of radiants, velocities, and orbits of meteoric bodies as well as results of a study of the upper atmosphere (80 - - 100 km).

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AM4017340

SUB CODE: GE, AS

OTHER: 054

SUBMITTED: 14Nov61

NR REF SOV:027

DATE ACQ: 13Mar64

Card 3/3

S/169/62/000/002/054/072
D228/D301

AUTHORS: Kasheyev, B. L. and Lebedinets, V. N.

TITLE: Some preliminary results of meteor activity observations in the IGY-IGC period

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1962, 3-4, abstract 2G17 (Mezhdunar. geofiz. god., Inform. byul. no. 3, 1961, 8 - 12)

TEXT: Measurements of the number of meteors in the period from December 1957 to January 1960 are reviewed. It is mentioned that the investigation of dense central coagulations in meteor streams is significant for cosmonauts. Comparison of the corresponding periods of 1958-1959 shows the diurnal variation's good repetition. The complex structure of the Geminide and Quadrantide flows was noted in the meteor-stream observations. The high activity of the Lyride flow is noted for the first time since 1922. The velocity of the Leonides was measured. /-Abstracter's note: Complete translation. /

Card 1/1

LEBEDYNETS, V.N.

28702

6.4738

S/021/61/000/003/006/013
D274/D301

AUTHORS: Dudnyk, B.S., Kashcheyev, B.L. and Lebedynets', V.N.

TITLE: Errors in radar measurements of meteor velocity,
due to diffusion

PERIODICAL: Akademiya nauk UkrSSR. Dopovidi, no. 3, 1961, 299-
302

TEXT: If ambipolar diffusion is taken into account, the expression
for the strength of the reflected signal at the receiver input, is

$$P_R = \frac{P_T G_T G_R \lambda^3 \alpha^2}{16\pi^2 R^3} \left(\frac{e^2}{mc^2} \right)^2 e^{-2\left(\frac{2\pi r_0}{\lambda}\right)^2} |I|^2, \quad (1)$$

check
equation
X

where P_T is the strength of the transmitter, G_T and G_R are the
directivity coefficients of the antennas, R - the distance from the
meteor

$$I = \int_{-\infty}^{x_0} e^{2\pi i x^2} \cdot e^{-(x_0 - x)} dx; \quad (2)$$

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Errors in radar measurements...

$$x = \frac{S}{\sqrt{R\lambda}}; \quad x_0 = \frac{S_0}{\sqrt{R\lambda}}; \quad \Delta = \frac{16\pi^2 D \sqrt{R}}{V \cdot \lambda^{3/2}}; \quad (3)$$

where S is the distance along the trail from the point of mirror reflection, S_0 - the coordinate of the head of the trail, V - the meteor velocity, D - the coefficient of ambipolar diffusion. Neglecting the broadening of the trail while the principal Fresnel zones are formed, one obtains the ordinary Fresnel integral

$$I \approx e^{-\frac{16\pi^2 D t}{\lambda^2}} \int_{-\infty}^{x_0} e^{2\pi i x^2} \cdot dx. \quad (4)$$

The positions of the maxima and minima of the diffraction pattern, computed by formula (4), are used for calculating the velocity of meteors, T.R. Kaiser (Ref. 1: Advances Phys., 2, 495 (1953)). The authors carried out, for various values of Δ , numerical integration by formula (2), and determined the exact position of the maxima and minima of the diffraction pattern. Comparing them with the

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Errors in radar measurements...

results obtained by using formula (4), the errors in using approximation (4) were obtained. A figure shows the errors in velocity-values related to the function Δ for the following velocity-measurements: v_1 - measured by the distance between the first and second maximum, v_2 - between first and third, v_3 - between first maximum and first minimum. (The error resulting from measurements by the distance between first and second minimum (v_4) never exceeded 2%). The figure shows that for $\Delta = 1$, the errors of v_1 and v_2 are 12.9 and 25%, respectively. For $\lambda = 8$ m, $v = 40$ km/sec, $R = 200$ km, to $\Delta = 1$ corresponds an altitude of approximately 100km. As at altitudes above 95 km, a large number of meteors is found, diffusion may lead to considerable errors in velocity measurements. Normally, the diffusion coefficient is found (according to formula (4)), by the exponential drop in the amplitude of the reflected signal. The velocity can be also found by measuring the amplitude ratio at the moments of the first and second maximum, and by the relationship between the distances between the first maximum and first minimum, and first minimum and second maximum. A special

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Errors in radar measurements...

study of errors due to diffusion is being carried out by the Khar'kov Polytechnical Institute (since 1957), within the framework of the IGY. A table shows the results of measurements of 10 meteors. From formula (3) it is evident that errors due to diffusion increase with altitude and velocity of meteor; thus the error in v_1 is 5% at 20 km/sec at an altitude of approximately 90 km; the same error, at 60 km/sec will be at approximately 97 km altitude. There are 1 figure, 1 table and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: T.R. Kaiser, Advances Phys., 2, 495 (1953); J.S. Greenhow, E.L. Neufeld, Journal Atm. Terrestr. Phys., 6, 133, (1955).

ASSOCIATION: Kharkivs'kyi politekhnichnyi instytut im. V.I. Lenina (Khar'kov Polytechnical Institute im. V.I. Lenin)

PRESENTED: by Academician V.G. Bondarchuk, AS UkrSSR

SUBMITTED: April 9, 1960

Card 4/4

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3,2440 (1041,1395)

29573
S/033/61/038/004/007/010
E133/E135

AUTHORS: Kashcheyev, B.L., Lebedinets, V.N., and Lagutin, M.F.

TITLE: Radio echo determinations of the orbits of individual meteors

PERIODICAL: Astronomicheskiy zhurnal, vol.38, no.4, 1961, 681-691
+ 1 plate

TEXT: The results obtained from visual observations of meteors are summarised in Ref.1 (F.L. Whipple, Astron. J., Vol.59, 201, 1954). The radio echo method of observing meteors has been in use at Jodrell Bank since 1958 (Ref.2: J.C. Gill, J.G. Davies, Monthly Notices Roy. Astron. Soc., Vol.116, 105, 1956). One result has been the discovery of large numbers of faint meteors (7-8 mag.) with almost circular orbits inclined at a large angle to the ecliptic (Ref.3: Meteory, Sbornik statey, IIL (Meteors, Symposium, IIL) 1959). The lifetime of these particles must be small (Ref.4: L. Kresák, Byul. Astron. in-tov Chekhoslovakii (Bulletin Astronom. Instit. Czechoslovakia) Vol.11, 1, 1960). Apparatus was installed at Khar'kov in December 1958 for the determination of individual meteor orbits. Observations have been
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29573

Radio echo determination of the

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made since August 1959. The general layout is indicated in Fig. 1. The radio-location equipment is at O, \bar{C} and K, where $OC = 7100$ m and $OK = 4500$ m (± 10 m). The transmission frequency is 36.4 Mc/s and the duration of the impulse is 10 microsec at 500 impulses per sec. The stations at \bar{C} and K transmit the data they receive back to O, after amplification. The resultant traces are photographed together. An example is shown in Fig. 2 (where the sinusoidal curve gives the Doppler frequencies determining the drift of the track). The position of the radiant and of the meteor orbit is determined by Kleiber's method (Ref. 7: I.A. Kleiber, *Opredeleniye orbit meteornykh potokov*, SPb, 1891 (Determination of the orbit of a meteor stream)) and is done by an electronic computer; otherwise it would be impossible to reduce all the data. In order to check the accuracy of the calculated orbits, observations were made of 298 members of the Geminid stream during December 9-14, 1959. The authors first consider the braking effect of the Earth's atmosphere so that they can deduce the velocity outside the atmosphere from the observed velocity. They arrive at the equation:

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Radio echo determination of the ... ²⁹⁵⁷³ S/033/61/038/004/007/010
E133/E135

$$\Delta v_m = - \frac{1.22}{v_0 \sigma} \quad (15)$$

which gives the velocity change in terms of the initial velocity and the parameter σ (the coefficient of heat transfer). They assume that $\log \sigma = \sim 11.2$ and that it does not vary much with the mass (Ref. 11; L.G. Jacchia, Smith, Contrib. Astroph., Vol. 2, No. 9, 1958). They find that a correction of ~ 0.6 km/sec should be made, therefore, to the observed Geminid velocity. The resultant r.m.s. error in the velocity measurements is ± 1.8 km/sec for a single meteor. This is due to four causes: a) inaccuracies in the allowance for atmospheric braking; b) the effect of atmospheric turbulence on velocity measurements; c) errors in velocity measurements due to diffusion of the meteor track; d) inaccuracy in the readings of the number of impulses per Fresnel zone. The data on the Geminids indicate a systematic change in the position of the radiant, and the orbital elements, with solar longitude. The authors compare their results with optical measurements for meteors of magnitude -5 to 0 (F.L. Whipple, Ref. 1) and for meteors of magnitude 0 to $+3$ (Ref. 14; G.S. Hawkins, Card 3/7).

Radio echo determination of the ...

²⁹⁵⁷³
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E133/E135

R.B. Southworth, Harv. Reprint Series II-128, 1958). The average orbital elements of fifteen meteors in Ref. 1 agree with the present measures, as does the systematic change in the orbital elements. The results in Ref. 14 appear to be less accurate, but also agree with the limits of error. That there was a change in the position of the radiant was already known, but this change in the orbital elements is new. Since it appears to be connected with the mass of the particles, it can only be explained by some form of braking of the meteors (e.g. by the Poynting-Robertson effect). Previous observations (Ref. 17: B.L. Kashcheyev, V.N. Lebedinets, Astron. zh., Vol. 36, 629, 1959) indicate that on the night of December 12-13 1959, a maximum was observed for meteors in the range 2-4 mag., but on the following night (13-14) the maximum was at about zero magnitude. It can be estimated from this, on the basis of the Poynting-Robertson effect, that the age of the stream is about 30 000 years (assuming a meteor density of 4 gm/cc).

There are 8 figures, 3 tables and 18 references: 10 Soviet-bloc and 8 non-Soviet-bloc. The four most recent English language references read as follows.

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Radio echo determinations of the ... ²⁰⁵⁷³ S/033/61/038/004/007/010
E133/E135

Ref.1: F.L. Whipple, Astron. J., Vol.59, 201, 1954.

Ref.2: J.C. Gill, J.G. Davies, Monthly Notices Roy. Astron. Soc.,
Vol.116, 105, 1956.

Ref.11: L.G. Jacchia, Smith. Contrib. Astroph. Vol.2, No.9, 1958.

Ref.14: G.S. Hawkins, R.B. Southworth, Harv. Reprint Series II-128,
1958.

ASSOCIATION: Khar'kovskiy politekhnicheskii institut imeni
V.I. Lenina
(Khar'kov Polytechnical Institute imeni V.I. Lenin)

SUBMITTED: July 18, 1960

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Card 5/7
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43280

S/831/62/000/008/001/016
EO32/E114

3.2500

AUTHORS: Kashcheyev, B.L., Dudnik, B.S., Lagutin, M.F.,
Lebedinets, V.N., Luk'yashko, D.N., and
Lysenko, I.A.

TITLE: Radar observations of meteors at Khar'kov

SOURCE: Ionosfernyye issledovaniya (meteory). Sbornik statey,
no.8. V razdel programmy MGG (ionosfera). Mezhdoved.
geofiz. kom. AN SSSR. Moscow, Izd-vo AN SSSR, 1962,
7-20

TEXT: This paper reports the results of analyses of radio
echoes from meteor trails which were recorded at the Khar'kovskiy
politekhnicheskii institut imeni V.I. Lenina (Khar'kov Polytechnical
Institute imeni V.I. Lenin) during July 1957 - May 1959. The
observations were in accordance with the IGY programme and were
carried out at 73.2 Mc/sec and 36.9 Mc/sec. Special measures were
taken to suppress extraneous interference. Pulse lengths of
ten microseconds were employed at repetition frequencies up to
500 cps and power per pulse ~50-70 kW. The detector sensitivity
was 5×10^{-14} W. The half-power beamwidth in the final
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Radar observations of meteors at ... S/831/62/000/008/001/016
E032/E114

experiments was $\pm 20^\circ$ (vertical plane) and $\pm 17^\circ$ (horizontal plane). The meteor velocities were measured by a diffraction method in which the velocities relative to earth were determined from signal amplitude fluctuations. Altogether 300 000 reflections from sporadic meteors were recorded and average diurnal variations in the number of meteors were obtained throughout the period. Fig. 10 shows three typical distributions (number of meteors versus mean sidereal time). The velocity distributions were also determined as functions of time and are reproduced in the paper. Finally, the mass distribution of sporadic meteors was found from the lengths of the reflected pulses. It was found that

$$N = N_0 m^{s-1} \quad \text{where } s \sim 2.$$

Owing to the large beamwidth, weak meteor showers could not be detected against the sporadic background. Brief details are given about the following showers which were the only reliably detected showers: Quadrantids, Lyrids, Geminids, η -Aquarids and Arietids (daytime). There are 16 figures.

Card 2/32

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E032/E114

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7.9600

AUTHORS:

Dudnik, B.S., Kashcheyev, B.L., and Lebedinets, V.N.

TITLE:

The effect of diffusion on radar measurements of the velocity of meteors

SOURCE:

Ionosfernyye issledovaniya (meteory). Sbornik statey, no.8. V razdel programmy MGG (ionosfera). Mezhdoved. geofiz. kom. AN SSSR. Moscow, Izd-vo AN SSSR, 1962, 21-25

TEXT:

It is noted that in all meteor velocity determinations the expansion of the meteor trail during the time of formation of the main Fresnel zones is neglected and hence the position of the maxima and minima of the diffraction pattern from which the meteor velocities are computed are found from the usual Fresnel integral

$$I \approx e^{-\frac{16\pi^2 Dt}{\lambda}} \int_{-\infty}^{x_0} e^{2\pi i x^2} dx \quad (3)$$

where D is the coefficient of ambipolar diffusion and λ is the wavelength.
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The effect of diffusion on radar... S/831/62/000/008/002/016
E032/E114

T.R. Kaiser (Advances Phys., 2, 1953, 495) is said to have arrived at the erroneous conclusion that if

$$\Delta = \frac{16 \pi^2 D \sqrt{R}}{v \lambda^{\frac{3}{2}}} \leq 2$$

where R is the oblique range to the meteor and v is its velocity, then the approximate expression for I given above does not introduce appreciable errors into the velocity calculation. The present authors have carried out a numerical integration of the more exact expression

$$I = \int_{-\infty}^{x_0} e^{2\pi i x^2} e^{-\Delta(x - x_0)} dx \quad (2)$$

where $x = \frac{s}{\sqrt{R\lambda}}$, $x_0 = \frac{s_0}{\sqrt{R\lambda}}$

and s is the distance along the trail measured in the direction of motion of the meteor from the point of specular reflection;
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The effect of diffusion on radar ... S/831/62/000/008/002/016
E032/E114

s_0 is the value of s at the head of the trail. Fig.1 shows the calculated relative errors in the above approximate velocity as a function of Δ (curve a - velocity determined from the distance between the first and second maxima; curve b - velocity determined from the distance between the first and the third maxima; curve c - velocity determined from the distance between the first maximum and the first minimum). When $\Delta = 1$, the errors for a, b and c are found to be 12, 9 and 25% respectively. When the velocity is determined from the distance between the second and third maxima the error is never greater than 2%. Numerical data are reproduced for meteors observed in accordance with the IGY programme. It is noted that when $\Delta > 1.5$, the diffusion coefficient can no longer be determined from the tail of the reflected signal because this tail is no longer exponential. However, Δ can be found by measuring the ratio of the amplitudes at the first and second maxima. The diffusion correction reaches about 5% at velocities of 20 km/sec and heights of about 90 km when the velocity is determined from the distance between the first and second maxima. When the velocity is 60 km/sec the 5% level

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The effect of diffusion on radar ...

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occurs at about 97 km. Since diffusion has the maximum effect on the position of the first maximum of the diffraction pattern, it is recommended that at heights greater than 90 km it is better to use maxima other than the first maximum. There are 3 figures and 2 tables.

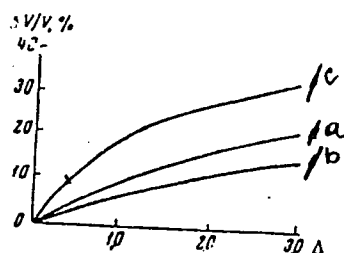


Fig.1

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A radar study of the structure ... S/831/62/000/008/003/016
E032/E114

the Jodrell Bank data (T.R. Kaiser. Meteors. London, 1950) showed that it was possible to detect masses from 0.0003 g upwards for the Geminids and from 0.0002 g upwards for the Quadrantids. The only assumption for these estimates was that the meteor bodies responsible for sporadic meteors have a mass distribution of the form

$$N(m) = N_0(m)^{-s}$$

with the same value of s . A preliminary report on the Geminids and Quadrantids was given in previous papers by B.L. Kashcheyev and V.N. Lebedinets (Astr. zh. 36, 1957, 623, and Astr. zh. 37, 1960, 119). The present report gives the results of new analyses in which the sporadic meteor background was taken into account more carefully. The $\log N$ versus $\log \tau$ curves were plotted for different times and each of the above three meteor showers (N-number of meteors with reflection lengths greater than τ). The data show that the central regions of meteor showers have a very complicated structure. The explanation of this structure is said to be very important to the study of disintegration of cometary nuclei and the evaluation of meteoric swarms. It was

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A radar study of the structure ...

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E032/E114

found that the Lyrids have a very narrow central region of high activity. This suggests that many showers which are considered to be of low activity may in fact contain dense particle swarms of various dimensions which may be missed in experimental studies owing to the unfavourable position of the radiant while the earth passes through the swarm. For example, it is noted that the systematic studies at Jodrell Bank did not lead to the discovery of the above enhanced activity. The main reason was that the antennas employed had a very narrow directional pattern. In visual observations the probability that this short-period phenomenon may be missed is even greater. There are 6 figures.

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L 13594-63
 SSD/APGS Pz-4/Pe-4/P1-4/P1-4 GW
 ACCESSION NR: AP3004329

EWG(k)/EWT(1)/FCC(w)/BDS/EEC-2/ES(v) AFFTC/ASD/ESD-3/

S/0033/63/040/004/0719/0732

78
77

AUTHOR: Lebedinets, V. N.

TITLE: Density of meteoric matter in the vicinity of earth orbit, from radio observations of meteors

SOURCE: Astronomicheskiy zhurnal, v. 40, no. 4, 1963, 719-732

TOPIC TAGS: meteor, meteor trail, meteoric particles, meteoric dust, radio-wave scatter, radar probe, meteoritic fallout, radar observation

ABSTRACT: Physical properties of meteor trails are discussed on the basis of theoretical calculations and some earlier data from radar and visual observations. Questions discussed include unique features of faint meteors, calculations on meteor detectability, and estimates of the amount of meteoritic matter falling on the earth annually. In the discussion, an arbitrary meteoric particle is chosen for reference with a mass of 5.5×10^{-4} gram, an approach radial velocity of 40 km/sec, creating at its point of maximum evaporation a trail with linear electron density of 10^{13} e/cm. Calculations show that the trail length of faint meteors (less than $+2^m$ absolute magnitude) will not generally exceed 17 km. The altitude h_m at which maximum evaporation occurs is calculated as a function of velocity for

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ACCESSION NR: AP3004329

particles of two hypothetical densities, 3.5 and 2.0 g/cm³; these values of h_m are shown to agree closely with measured values of meteors of similar brightness based on photographic data. Deceleration of particles in the process of evaporation and ionization is discussed and shown to be negligible for particles larger than the chosen model size. Calculations show that trail radii at the altitude under study (approximately 90—100 km) fall in the range of several meters, which also agrees with existing radar data employing the two-wavelength observation method. The question of radio-wave scatter in meteor trails and detectability in general is treated separately for saturated and nonsaturated trails; for each case the minimum detectable return signal is expressed as a function of meteor and radar parameters. By way of illustration, a table is given which correlates the absolute magnitude of the meteor, meteor particle size, and particle velocity to probability of detection when using an 8-m radar wavelength. In order to determine the quantity of meteor particles falling on earth, the average annual incidence of meteors detected in the atmosphere is considered in terms of the model particle size; this yields an estimated annual fallout on earth of 10^4 to 2×10^5 tons. Orig. art. has: 5 figures, 4 tables, and 40 formulas.

ASSOCIATION: Khar'kovskiy politekhnicheskikh institut im. V. I. Lenina (Khar'kov Polytechnic Institute)

SUBMITTED: 06Mar62

SUB CODE: AS

Card 2/2

DATE ACQ: 20Aug63
NO REF SOV: 010

ENCL: 00
OTHER: 027

KASHCHIEV, B.L.; LEBEDINETS, V.K.; LAGUTIN, M.F.

Characteristics of the motion of small meteoric bodies. Dokl. AN
SSSR 164 no.6:1252-1257 0 '65. (VIRA 12:10)

1. Khar'kovskiy politekhnicheskij institut im. V.I.Lenina.
Submitted March 13, 1965.

L 16886-66 EWT(1)/FCC/EWA(d)
ACC NR: AP6003172

GW

SOURCE CODE: UR/0030/65/000/012/0103/0104

AUTHOR: Lēbedinets, V. N. (Candidate of physico-mathematical sciences)

49
420

ORG: none

TITLE: At the Astronomic Council (plenary session of the Committee on Comets and Meteors)

SOURCE: AN SSSR. Vestnik, no. 12, 1965, 103-104

TOPIC TAGS: astrometry, astronomical telescope, comet, meteor observation, meteor stream, meteor, astronomical conference, radar astronomy, atmospheric circulation, atmospheric turbulence

ABSTRACT: The eleventh plenary session of the Committee on Comets and Meteors of the Astronomical Council, Academy of Sciences USSR, was convened at Kazan on 7-9 September 1965. Participating in it were specialists from various Soviet institutes as well as the Czechoslovak scientists, J. Raichl and J. Stol. Besides the plenary session, meetings of the sections on the physical theory of meteors and on cometary astronomy were held, as well as those of working groups on radar investigations of meteors.

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ACC NR: AP6003172

drifts, and turbulence in the meteoric zone of the atmosphere, on statistics, and on optical observations of meteors. A report on the work of the Committee during the period since the 10th plenary session (1963) was presented by V. V. Fedynskiy. One of the basic tasks of the Committee was to coordinate research according to the program of the IQSY (Problems: "Meteors"—study of the atmospheric circulation on the basis of the observation of meteor train drift; "Comets"—study of comets, as indicators of solar activity).
12, 55

Reports presented at the plenary meeting dealt with four main topics:

1) Observations of meteors according to the IQSY program. In this regard, studies of turbulence by Kharkov scientists have established periodic variations of its parameters with a half-year period. The maximum of turbulence was found to be at the altitude of 104 km.

2) Physical theory of meteors in which the main topic was the discussion of the problem of the fragmentation, density, and structure of meteoric bodies.

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ACC NR: AP6003172

3) Distribution of meteoric matter in circumterrestrial space and in the solar system: analysis of the catalogue of 12,500 individual orbits of meteoric bodies, generating meteors of approximately the seventh stellar magnitude which was completed at the Kharkov Polytechnical Institute and the Institute of Applied Geophysics. About 195 meteor streams were detected, and the connection between some of them and comets was established.

4) Research in the field of cometary astronomy was characterized by considerable activity in observations of comets in general, but by a lag in the observation of faint comets (12-20 stellar magnitude). The Conference recommended the study of comets by the largest available telescopes, as well as the construction of special cometary telescopes aided by electronic equipment. [ATD PRESS: 4177-F]

SUB CODE: 03, 04 / SUBM DATE: none

Card 3/3

BK

L 28892-66 EWT(1)/FCC GW
ACC NR: AP6018050 SOURCE CODE: UR/0020/66/168/003/0543/0546
AUTHOR: Lebedinets, V. N.; Portnyagin, Yu. I. 36
ORG: Institute of Applied Geophysics (Institut prikladnoy 35
geofiziki) B
TITLE: The mechanism of crushing small meteors in the atmosphere
SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 543-546
TOPIC TAGS: meteoric path, meteoric brightness, thermal flux, radiant,
upper atmosphere
ABSTRACT: Photographs revealed a series of properties of weak meteors,
including path shortening, a rapid increase in brightness near the
appearance point, and an anomalous braking increase in the path. These
properties have been explained by the porous structure of the meteors
and a hypothesis of porosity is not necessary. During the collision of
a meteor with air molecules the energy is uniformly distributed on the
surface of a rotating spherical meteor. The density of the thermal
flux depends upon the time, the coefficient of thermal transfer, the
velocity of the meteor, and the zenithal distance of the radiant.
Thermal conductivity formulas were developed and their solution made it
possible to determine the quantity of matter evaporated from the meteor

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L 28892-66

ACC NR: AP6018050

surface. The density of the upper atmosphere may be determined by equating the energy spent for evaporation with that computed with these formulas. When the radius of the body is small, the meteor is rapidly heated throughout, and at a certain height it burns and is deformed in the melted state. Taking the Weber number for the stability of a liquid droplet into consideration, the critical Weber number We_0 for a viscous liquid is found to be about 6.5. When the Weber number of the droplet is greater than the critical value, no droplet crushing occurs. The boundary value of the initial radius of a stable droplet is determined and this radius determines the possibility of crushing. The possibility of crushing is discussed for many cases. Big meteors crush at the height of intense evaporation and the droplets separated from the meteor can be further crushed when they are not stable. Orig. art. has: 1 figure and 17 formulas. [EG]

SUB CODE: 03, 04 / SUBM DATE: 10 May 65 / ORIG REF: 004 / OTH REF: 006
ATD PRESS: 5006

Card 2/2 CC

L 47481-66 EWT(2) GH

ACC NR: AP6028799

SOURCE CODE: UR/0033/66/043/004/0854/0867

AUTHOR: Lebedinets, V. N. ; Kashcheyev, B. L.

323

ORG: Khar' kov Polytechnic Institute (Khar' kovskiy politekhnicheskiy institut);
Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Meteoric matter in the vicinity of an earth orbit on the basis of radar observations of meteors

SOURCE: Astronomicheskiy zhurnal, v. 43, no. 4, 1966, 854-866

TOPIC TAGS: radar meteor observation, meteor radiant, meteor velocity

ABSTRACT: An annual cycle of radar measurements of individual radiants and velocities of meteors brighter than +7^m was carried out at the Khar' kov Polytechnic Institute from November 1959 to December 1960. The orbits of 12,500 meteoric bodies were computed. The results obtained were corrected for the selectivity of radar observations with respect to the radiant coordinates and meteor velocities, and also by taking into account the probability of the elements of a meteoric body encountering the earth. The observed and corrected distributions of elements of the meteoric body orbits are given, and compared with the

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UDC: 523.035.27

L 47481-66

ACC NR: AP6028799

results of photographic observations. The major axes of the orbits decrease systematically with a decrease in the mass of the meteoric bodies. The radar observations indicate two new principal types of orbits of small meteoric bodies: orbits with $e < 0.7$ and $30^\circ < i < 165^\circ$, and orbits similar to those of short-period comets, differing from the latter in that they have smaller perihelion distances and dimensions. The cosmogonic significance of detecting these types of orbits is discussed. Orig. art. has: 13 figures, 8 formulas, and 2 tables. [Based on authors' abstract] [NT]

SUB CODE: 03/ SUBM DATE: 09Apr65/ ORIG REF: 006/ OTH REF: 014/

hs

Card 2/2

L 09097-67 EWT(1) GW
ACC NR: AP7002346

SOURCE CODE: UR/0203/66/006/004/0712/0716

AUTHOR: V. N. Lebedinets and Yu. I. Portnyagin

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Initial radius of an ionized meteor trail

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 4, 1966, 712-716

TOPIC TAGS: meteor trail, meteor

ABSTRACT: The initial radius of an ionized meteor trail has been computed, taking into account the dependence of the effective diffusion cross sections of meteor atoms in the atmosphere on the velocity of the meteor. Since the initial expansion of the trail occurs for the most part due to the first several paths of the evaporating particles, the authors consider the contribution of the individual paths to the initial radius. The derived values of the initial radius R_{in} satisfy the condition $0.93 R_{in}$, where R_{in} is the length of the free path of the evaporating particles for a given meteor velocity. The computed values of the initial radius made at Khar'kov, Kiev and Jodrell Bank. Orig. art. has: 3 figures and 21 formulas. [JPRS: 37,931]

SUB CODE: 03 / SUBM DATE: 26Jul65 / ORIG REF: 005 / OTH REF: 006

Card 1/1 nst

UDC: 523.53

0925 0638

IEBEDINOV, N. S.

IEBEDINOV, N. S. - "Cedar Forests of the Atlay State Forest Preserve."
Sub 7 Mar 52, Moscow Order of the Lenin State U imeni M. V. Lomonosov.
(Dissertation for the Degree of Candidate in Biological Sciences).

SO: Vechernaya Moskva January-December 1952

LEBEDINOVA, N. S.

Defended his Candidates Dissertation in the Biology - Soil Faculty of Moscow State University on 7 April 1952.

Dissertation: "Cedar Forests of the Altay State National Forest."

SO: Vestnik Moskovskogo Universiteta, Seriya Fiziko-Matematicheskikh i Yestestvennykh Nauk, No. 1, Moscow, Feb 1953, pp 151-157: transl. in W-29782, 12 April 54, For off. use only.

LEBEDINOVA, N.S.

Moisture balance of the dark brown soils of walnut forests.
Pochvovedenie no. 5:21-33 My '61. (MIRA 14:5)

1. Vostochno-sibirskiy filial AN SSSR.
(Forest soils) (Soil moisture)

LEBEDINOVA, N.S.

Pine forests of Nizhneilinsk District. Izv. SO AN SSSR no.12:
Ser. biol.-med. nauk no.3:77-85 '64. (MIRA 18:6)

1. Vostochno-Sibirskiy biologicheskiy institut Sibirskogo
otdeleniya AN SSSR, Irkutsk.

T

Country : USSR
Category: Human and Animal Physiology. Action of Physical
Factors. Ionizing Radiation.

Abs Jour: RZhBiol., No 19, 1958, 89386

Author : Lebedinskaya, A.V.

Inst : -

Title : On the Problem of the Effects of Fall-Out of
Radioactive Isotope Strontium (Sr^{90}).

Orig Pub: Med. radiologiya, 1957, 2, No 5, 22-33

Abstract: The conditions of diffusion in the biosphere of
 Sr^{90} fall-out following experimental nuclear ex-
plosions were considered and the paths of its
penetration into the human organism through bio-
logical links were investigated; plants-animal
milk -man and vegetables, fish, meat-man. Results

Card : 1/2

T-150

Country : USSR
Category: Human and Animal Physiology. Action of Physical
Factors. Ionizing Radiation.

Abs Jour: RZhBiol., No 19, 1950, 09306

of determinations of Sr^{90} content in human bones
in the various parts of the world were given (on
the average 0.2 strontium unit for adults and
0.5 for children). -- E.B. Glikson

Card : 2/2

Country : USSR
Category: Human and Animal Physiology. Action of Physical
Factors. Ionizing Radiation.

Abs Jour: RZhBiol., No 19, 1958, 89386

of determinations of Sr^{90} content in human bones
in the various parts of the world were given (on
the average 0.2 strontium unit for adults and
0.5 for children). -- E.D. Glikson

Card : 2/2

LEBEDINSKAYA, E.A.

Functional state of the cerebral cortex in glaucoma. Vest.oft. 32 no.5:24-
29 S-O '53. (MLRA 6:10)

1. Leningradskiy nauchno-issledovatel'skiy institut glaznykh bolezney.
2. Glaznaya klinika Leningraskogo pediatricheskogo meditsinskogo instituta.
(Brain) (Glaucoma)

LEBEDINSKAYA, E. A.

LEBEDINSKAYA, E. A.--"Materials for the functional characteristics of the Visual Analyzer as Used for Glaucoma."*(Dissertation for Degrees in Science and Engineering Defened at USSR Higher Educational Institutions.) Min of Health Protection RSFSR, Leningrad Sanitary-Hygienic Medical Inst. Leningrad, 1955

SO: Knizhnaya Letopis' No. 25, 18 Jun 55

* For Degree of Candidate in Medical Sciences

ANDREZEN, E.E., professor; LEBEDINSKAYA, E.A.; RIVKINA, Ye.O., kandidat
meditsinskikh nauk (Leningrad)

Prevention of symblepharon after burns of the eyeball and eyelids.
Vest. oft. 69 no.5:22-25 S-O '56. (MIRA 9:12)
(EYE, dis.
burns, prev. of symblepharon)

KOKHNO, Yuriy Arsen'yevich; ISBEDINSKAYA, Emma Abramovna; MEN¹,
Sof'ya Mikhaylovna; SERGIYENKO, Lyudmila Andreyevna;
FELIKSON, Anna Moiseyevna; SHAGIYAN, Valentina
Fedorovna; YENIKOLOPOV, N.S., doktor khim. nauk,
retsenzent

[Polyformaldehyde] Poliiformal'degid. Kiev, Tekhnika,
1964. 90 p. (MIRA 18:1)

LEBEDINSKAYA, I.I.

Some characteristics of tonic contraction of skeletal muscles in reptiles. Fiziol. zhur. 49 no.5:596-602 My 1963.

(MIRA 17:11)

1. From the Sechenov Institute of Evolutionary Physiology, Leningrad.

MIKHAILOVA, O.A.; LEBEDINSKAYA, I.I.

Cardiac spinal reflexes from the central end of the cervical sympathetic nerve. Fiziol. zhur. 51 no.1:134-141 Ja '65. (MIRA 1867)

1. Institut evolyutsionnoy fiziologii imeni Sechenova AN SSSR i
Institut fiziologii imeni Pavlova AN SSSR, Leningrad.

MIKHAYEVA, O.L.; LEVITSKAYA, I.I.

Mechanism of the facilitation of the cardiovascular effects in the stimulation of the central caudal end of the cervical sympathetic nerve. Fiziol.zhur. 51 no.7:821-825 '65.

(MIRA 18:10)

1. Institut fiziologii imeni I.P.Pavlova AN SSSR i Institut evolyutsionnoy fiziologii i biokhimi i imeni I.M.Sechenova AN SSSR, Leningrad.

LEBEDINSKAYA, I.I.

Morphological and functional differentiation in the peripheral motor apparatus in reptiles. Fiziol. zhur. 51 no.10:1199-1209 O '65. (MIRA 18:12)

1. Institut evolyutsionnoy fiziologii i biokhimii imeni I.M. Sechenova AN SSSR, Leningrad. Submitted May 11, 1964.

BAADE, Fritz [Beade, Fritz], pref.; BATSANOVA, N.A. [translator]; FOMIN, B.S. [translator]; VISHNEV, S.M., red.; LEBEDINSKAYA, L.N., red.; KHOMYAKOV, A.D., tekhn.red.

[World power engineering; nuclear power - now or in the future?]
Mirovye energeticheskoe khoziaistvo; atomnaya energiya - seichas ili v budushchem? Moskva, Izd-vo inostr.lit-ry, 1960. 247 p.
Translated from the German. (MIRA 13:12)
(Power resources)

SADOMIRSKIY, D.M.; FIL'MENSHTeyN, I.D.; LEBEDINSKAYA, M.L.

Gelation of latexes in the presence of polyvinyl methyl ether. Koll.
zhur. 25 no.6:679-682 N-D '63. (MIRA 17:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii i Nauchno-issle-
dovatel'skiy institut rezinovykh i lateksnykh izdeliy.

LEBEDINSKAYA, N.

POLACHEK, P. [POLACEK, P.]. LEBEDINSKAYA, N. [LEBEDINSKA', N.]

Modifications of peripheral nerves during cooling and artificial
hypothermia in laboratory animals [with summary in English].
Biul. eksp. biol. i med. 45 no. 5: 118-121 My '58 (MIRA 11:6)

1. Iz kafedry anatomii Voenno-meditsinskoy ordena respubliki
Akademii imeni Ya. Ye. Purkina. Predstavlena deystvitel'nyim chlenom
AMN SSSR V. N. Chernigovskim.

(NERVES, PERIPHERAL, physiology,
eff. of hypothermia (Rus))
(HYPOTHERMIA, effects,
on peripheral nerves (Rus))

LEBEDINSKAYA, N.P.

Comparative study of some methods for primary selection of anticancer preparations. Izv. AN Arm. SSR biol. nauki 16 no.8:21-28 Ag'63 (MIRA 17:4)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

LEBEDINSKAYA, S.I.

PROCESS AND PROPERTIES INDEX

112

The action of barium chloride upon cardiac nerves of the frog. S. I. LEBEDINSKAYA AND E. N. SPERRANSKA-STEPANOVA. *Ark. Biol. Nauk* 20, 85-91(1920).—BaCl₂ in concns. of 1×10^{-2} to 1×10^{-4} in the perfusion fluid, with the heart *in situ* paralyzes both the vagus and sympathetic nerves. Adrenaline added in the course of sympathetic paralysis by BaCl₂ does not alter the rhythm or the force of the contractions. Arce-line added during vagus paralysis induced by BaCl₂ arrests the heart completely, which effect can be counteracted by peripheral application of atropine to the heart. Prolonged perfusion with BaCl₂ leads to cessation of contractions, when the direct excitability by mech. and elec. stimuli also disappears. W. A. PERLZWEIG

AS 6-55.4 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
COMMON ELEMENTS																										COMMON ELEMENTS																									
LEBEDINSKAYA, S. I.																										11F																									
<p>The relation of the acidity of gastric juice to the rate of its secretion. M. M. Gorbunova, S. I. Lebedinskaya and V. V. Savich. <i>Arch. sci. biol. (U. S. S. R.)</i> 33, 615-21 (in German 521)(1933).—The rate of secretion and the activity of the juice in the Pavlov pouches in dogs varied independently with various stimulating agents. The acidity was greatly dependent upon the amt. of mucin secreted.</p> <p>W. A. Perlzweig</p>																																																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																										E2																									
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USSR/Medicine - Oncology

Mar 51

"Some Methods of Experimental Investigation of Tumors on the Basis of I. P. Pavlov's Teaching," Prof S. I. Lebedinskaya, Prof A. A. Solov'yev, Moscow, Inst Gen and Exptl Path, Ak Med Sci USSR

"Klin Med" Vol XXIX, No 3, pp 11-14

Reviews previous work on subject. Mentions former own expts with transplantable rabbit tumors demonstrating effect of trauma (and resulting modification of prolonged reflexes) on localization of metastases. Prescribe recent own expts on subcutaneous injection of 9,10-dimethyl-1,2-benzanthracene (I)

181T52

USSR/Medicine - Oncology (Contd)

Mar 51

into rats (causing sarcoma) and subsequent cutaneous application of nonspecific chem irritant (II). II applied to hip opposite to that in which I was injected strengthened effect of I. II applied to same hip as I either caused small reinforcement of effect of I or weakened that effect, depending on compn of II. I applied to back of the neck had no effect on action of II.

181T52

LEBEDINSKAYA S. I.

LEBEDINSKAYA, S.I. [editor]; GORIZONTOV, P.D., chlen-korrespondent [reviewer].

~~LEBEDINSKAYA, S.I. [editor]; GORIZONTOV, P.D., chlen-korrespondent [reviewer].~~
"Disease, therapy, and recovery." Reviewed by P.D.Gorizontov. Arkh.pat.
15 no.3:79-82 My-Je '53. (MIRA 6:11)

1. Akademiya meditsinskikh nauk SSSR (for Gorizontov).
(Diseases) (Therapy)

LEBEDINSKAYA, S. I.

"The Genesis and Development of Induced Tumors Under Certain Conditions of
Reactivity of the Organism Altered by Supplementary Irritants" p. 322

Problema Reaktivnosti v Patologii, Medgiz, Moscow, 1954, 344pp.

EXCERPTA MEDICA Sec 16 Vol 7/7 Cancer July 59

2501. **Morphology of induced rat sarcoma depending on the type and function of the nervous system (Russian text)** LEBEDINSKAYA S. I. and SOLOVIEV A. A. Inst. of Normal and Pathol. Physiol., AMS, Moscow *Vopr. Onkol.* 1958, 4/4 (425-431) Illus. 5

In this experiment, 24 female rats weighing from 110 to 120 g. were used. The strength, motility and balance of the nervous system, and its typological characteristics were established according to Pavlov's method, after which 0.8 mg. of 9:10-dimethyl-1:2-benzanthracene in oil was administered s.c. The animals were divided into 2 equal groups. In the first group, the influence of typological characteristics of the nervous system on the morphological structure of the tumour was determined. In the 2nd group, in addition, a strain was put on the nervous system, leading to a neurosis (although neurotic conditions were also observed in the first group). In the first group, 6 animals belonged to the 'strong' type (3 developed tumours) and 6 to the 'weak' type (5 developed tumours). In the 2nd group, 7 were of the 'strong' type (3 animals did not develop tumours) and 5 of the 'weak' type (all developed tumours). In animals of the 'strong' type in the first group the tumours showed a higher degree of differentiation than in those of the 'weak' type. This morphological distinction between the tumours in 'strong' and 'weak' animals was not observed in the 2nd group (neurotic animals). All tumours here were highly polymorphic spindle cell sarcomas (rhabdomyosarcomas?). (A connection between the condition of the nervous system and the morphological characteristics of the tumour seems not yet proven: histological polymorphism in experimental tumours is well-known, and the number of animals was small. Abstractor's note.)

Brandt - Berlin

LEBEDINSKAYA, S.I., prof.; SOLOV'YEV, A.A., prof.

The tumor processes and characteristics of its pathogenesis.
Vest.AMN SSSR 14 no.7:42-50 '59. (MIRA 12:9)

1. Laboratoriya eksperimental'noy patologii i laboratoriya
eksperimental'noy patomorfologii Otdela obshchey patologii
Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.
(NEOPLASMS etiology)

LEBEDINSKAYA, T.A., kand.med.nauk; ANANENKO, A.A., kand.med.nauk

Oxygen deficiency in pneumonias in children. Report No.1.
Pediatriia no.9:11-15 '61. (MIRA 14:8)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo
instituta Ministerstva zdravookhraneniya RSFSR (dir. - doktor
med.nauk A.P.⁸² Chernikova).
(ANOXEMIA) (PNEUMONIA)

LEBEDINSKAYA, T.A.; LEVINA, A.V.; SAVEL'YEVA, V.V.

Clinical peculiarities of staphylococcal infection originating
during antibiotic treatment. Vop.okh.mat. i det. 1 no.2:61-63
Mr-Ap '56. (MLRA 9:9)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo
instituta (dir.-prof. A.L.Libov, zav., klinikoy - prof.M.N.Nebytova-
Luk'yanchikova) Leningrad.

(STAPHYLOCOCCUS) (ANTIBIOTICS)

KALLINIKOVA, M.N.; LEBEDINSKAYA, T.A.

Dynamics of changes in the riboflavin (vitamin B2) content of the blood of infants in intoxications of intestinal origin, pneumonia, and certain other diseases. Vop.okh.mat. i det. 1 no.2:84 Mr-Ap '56.
(MLRA 9:9)

1. Iz biokhimicheskoy laboratorii i iz kliniki rannego detstva Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir.-prof. A.L.Libov) Leningrad.
(RIBOFLAVIN) (INFANTS--DISEASES)

LEEEDINSKAYA, T.A. ^MCan Med Sci -- (diss) "Change in Vitamin B₁ Content
in Blood ^{DISEASES}~~Under~~ Certain ~~Illnesses~~ of Young Children and Its Role in the
Development of Distrophy." Len, 1957, 17 pp (Len Pediatric Med Inst).
120 copies (KL, 10-58, 121).

- 39 -

LEBEDINSKAYA, T. A.

KALLINIKOVA, M. N.; LEBEDINSKAYA, T. A.; SHCHERBAKOVA, M. P.

Dynamics in the change of the content of several B vitamins in the blood of small children according to various methods of administration. *Pediatrics* no. 7.88-88 J1 '57. (MIRA 10:10)

1. Iz biokhimicheskoy laboratorii i iz kliniki rannego detstva
Leningradskogo nauchno-issledovatel'skogo pediatricheskogo instituta
(dir. - prof. A. L. Likhov)
(VITAMINS - B)

LEBEDINSKAYA, T.A.; GROMOVA, V.N.

Cirrhosis of the liver in infants. Vop. okhr. mat. i det. 6
no. 1:88-90 Ja '61. (MIRA 14:4)

1. Iz klinicheskogo otdela (zav. - dotsent N.P. Savvatimskaya)
Nauchno-issledovatel'skogo pediatricheskogo instituta (dir.
A.P. Chernikova, zam. direktora po nauchnoy chasti - prof.
N.R. Shastin) Ministerstva zdoravookhraneniya RSFSR.
(LIVER---CIRRHOSIS) (INFANTS---DISEASES)

LEBEDINSKAYA, T.A., kand.med.nauk; ANANENKO, A.A., kand.med.nauk

Some ways of compensating for oxygen deficiency in pneumonias
in infants. Sov.med. 26 no.10:82-87 O '62. (MIRA 15:12)

1. Iz kliniki rannego vozrasta i biokhimicheskoy laboratorii
Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo
instituta (dir. - kand.med.nauk V.P.Spirina) Ministerstva
zdravookhraneniya RSFSR, Moskva.
(PNEUMONIA) (ANOXEMIA) (VITAMIN THERAPY)

LEBEDINSKAYA, T.A., kand.med.nauk; ANANENKO, A.A., kand.med. nauk

Significance of methemoglobinemia in the pathogenesis of oxygen
insufficiency in pneumonia in children. *Pediatrics* 4 no.7:
32-37 J1'63 (MIRA 16:12)

1. Iz kliniki rannego vozrasta (zav. - prof. N.R.Shastin) i
biokhimicheskoy laboratorii (zav. - doktor med. nauk N.Ye.
Ozeretskoy) Nauchno-issledovatel'skogo pediatricheskogo
instituta (dir. - kand.med. nauk V.P.Spirina) Ministerstva
zdravookhraneniya RSFSR.

LEBEDINSKAYA, T.A.; ANANENKO, A.A.

Some factors influencing the development of oxygen deficiency
in pneumonia of early childhood. *Cesk. pediat.* 20 no.3:353-357
Mr '65

1. Gosudarstvennyy nauchno-issledovatel'skiy Peditricheskiy
institut Ministerstva Zdravookhraneniya RSFSR, g. Moskva.

FATEYEVA, Ye. M., kand. med. nauk; LEBEDINSKAYA, V. V.

"Hypotrophy of newborn infants"; clinical etiological observations. *Pediatrics* no.4:3-8 '62. (MIRA 15:4)

1. Iz kliniki rannego vozrasta (zav. - prof. I. V. TSimbler)
Instituta pediatrii AMN SSSR (dir. - dotsent M. Ya. Studenikin)
i detskogo otdeleniya (zav. - kandidat meditsinskikh nauk Ye. Ch.
Novikova) Instituta akusherstva i ginekologii RSFSR (dir. -
prof. O. V. Makeyeva)

(INFANTS(NEWBORN)—GROWTH)

KALENDAROV, G.S.; LEBEDINSKAYA, Ye.I.

Apparatus for electronarcosis and method of its application in sleep therapy. Fiziol. zh. SSSR 38 no.6:751-755 Nov-Dec 1952. (CML 23:4)

1. Laboratory of Experimental Physiology for Revival of the Organism of the Academy of Medical Sciences USSR, Moscow.

KALENDAROV, G.S.; LEBEDINSKAYA, Ye.I.

Physiological mechanism and stages of development of electronarcosis.
Fiziol. zh. SSSR 39 no.2:146-152 Mar-Apr 1953. (GIML 24:3)

1. State Central Scientific-Research Institute of Physical Therapy Methods
imeni I. M. Sechenov, Yalta.

LEBEDINSKAYA, Ye.I.; POLYAKOVA, A.G.

Some age-dependent changes in the interaction between the first and second signal systems in two-to seven-year-old children. Vop.psikhol. 3 no.1:53-60 Ja-F '57 (MIRA 10:3)

1. Kafedra fiziologii vrashey nervnoy deyatel'nosti Moskovskogo universiteta i Otdel razvitiya i vospitaniya Instituta pediatrii Akademii meditsinskikh nauk SSSR.
(Child study) (Conditioned response)

LEBEDINSKAYA, Ye. I., Cand Biol Sci—(diss) "Temporary bonds
between indifferent stimuli in children from one to four years
of age." Moscow, 1958. 12 pp (Mos Order of Lenin State University
im M.V.Lomonosov), 170 copies. ↑ (KL, 38-58,105).

List of author's works at end of text.

LEBEDINSKAYA, Ye.I.

Treatment of sleep disturbances in patients with cerebral arterio-sclerosis. Trudy Gos. nauchno-issl. inst. psikh. 22:380-394 '60.

(MIRA 15:1)

1. Klinika sosudistyykh psikhozov (zav. klinikoy - prof. V.M.Banshchikov)
Gosudarstvennogo nauchno-issledovatel'skogo instituta psikiatrii
Ministerstva zdravookhraneniya RSFSR.

(CEREBRAL ARTERIOSCLEROSIS)

(SLEEP)

LEBEDINSKAYA, Ye.I.; FEYGENBERG, I.M.; FREYEROV, O.Ye.

Generalized orientation reactions in the defective stage of
schizophrenia. Zhur. nevr. i psikh. 62 no.1:90-98 '62;

(MIRA 15:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sudebnoy
psikhiatrii imeni Serbskogo (dir. -- dotsent G.V.Morozov) i kafedra
fiziologii vysshey nervnoy deyatel'nosti cheloveka i zhivotnykh
(zav. -- prof. L.G.Voronin) Moskovskogo gosudarstvennogo universiteta.
(SCHIZOPHRENIA) (ORIENTATION)
(ELECTROENCEPHALOGRAPHY)

LEBEDINSKAYA, Ye.I.; MILYUTINA, L.A.

Some characteristics of the formation of temporary connections in intact pigeons and birds deprived of the cerebrum according to data of electrophysiological analysis. Trudy Un. družh. nar. 7. Vop. med. no.1:115-126 '64. (MIRA 18:9)

1. Kafedra normal'noy fiziologii. Universiteta Druzhby Narodov imeni Patrisa Lumumby, Moskva.

LEBEDINSKAYA, Z.

Rapid method of determining salt in canned meat. Mias.ind.SSSR
31 no.2:45 '60. (MIRA 13:8)

1. Novosibirskiy myasokombinat.
(Meat, Canned) (Salt--Analysis)

L 36194-66 FBD/EWT(1)/EEC(k)-2/T/EWP(k) LJP(c) WG
ACC NR AP6011448

SOURCE CODE: UR/0109/66/011/004/0668/0674

AUTHOR: Korovitsyn, A. V.; Naumova, L. V.; Lebedinskaya, Z. T.

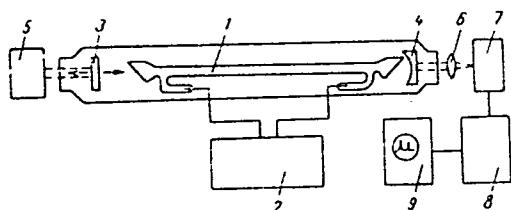
ORG: none

TITLE: Mode selection in the semiconcentric resonator of a gas laser

SOURCE: Radiotekhnika i elektronika, v. 11, no. 4, 1966, 668-674

TOPIC TAGS: gas laser, laser mode

ABSTRACT: A new method of mode selection involving a special tuning of a semi-concentric resonator was investigated. The resonator was formed by spherical and plane mirrors spaced close to the spherical-mirror radius. The exact resonator length was very essential. A He-Ne laser (see figure) could, depending on the mirrors used, emit either an infrared 1.15- μ or red 0.63- μ radiation. It comprised: 1 - discharge tube; 2 - 3-kv supply;



Experimental He-Ne laser

Card 1/2

UDC: 621.378.335.092:621.391.84

L 36194-66
ACC NR: AP6011448

3 - plane mirror; 4 - spherical mirror; 5 - calorimeter; 6 - focusing lens; 7 - FEU-62 photomultiplier; 8 - UR3 amplifier; 9 - SCh-8 or SCh-9 spectrum analyzer. The discharge tube was 1100 mm long; the spherical-mirror radius, 1300 mm. With the inter-mirror distance considerably shorter than the spherical-mirror radius, several modes were observed. When this distance was made close to the radius, only one TEM₀₀-mode remained; the power of this mode constituted 0.75—0.8 maximum laser power. Thus, the mode selection is highly efficient in a near-semiconcentric system. Calculation of diffraction loss and Q-factor is presented. "The authors wish to thank A. L. Mikaelyan for guidance of this project." Orig. art. has: 8 figures and 8 formulas.

SUB CODE: 20, ~~09~~ / SUBM DATE: 27Feb65 / ORIG REF: 000 / OTH REF: 004

Card 2/2 MLP

ARONOV, D.; LEBKIDINSKIY, A.

Disseminating advanced experience and new technical achievements.
Avt. transp. 36 no.5:22 My '58. (MIRA 11:6)
(Transportation, Automotive---Study and teaching)

ARONOV, D.; LEBEDINSKIY, A.

Effect of carburetor needle regulation on the characteristics of
the GAZ-51 engine. Avt. transp. 36 no.5:23-25 My '58. (MIRA 11:6)
(Automobiles--Engines--Carburetors)

LEBEDINSKIY, A., starshiy svarshchik

Automatic control enters the shop. Izobr.i rats. no.9:36 S '60.
(MIRA 13:10)

1. Staleprokatnyy zavod imeni Dzerzhinskogo, Odessa.
(Odessa--Steelworks) (Automatic control)

LEBEDINSKIY, A., general-mayor aviatsii; GIL', S., shofer V.I.Lenina,
personal'nyy pensioner; IVANOVA, V., polyarnaya radistka;
GORJAINOV, I., Geroy Sotsialisticheskogo Truda; BORTS, V.,
uchastnitsa podpol'noy organizatsii "Molodaya gvardiya".

Our customers speak out. Zhil.-kom.khoz. 12 no.11:4-5 N '62.
(MIRA 15:11)

(Municipal services)

LEBEDINSKIY, A. A.

"Investigation of the Relation of the Coefficient of Hydraulic Resistance to the Number R Under Condition of Operation of Airplane Shock Absorbers." Cand Tech Sci, Moscow Aviation Inst, Moscow, 1954. (RZhMekh, Apr 55).

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

L 39693-65

ACCESSION NR: AP5006686

S/0219/65/059/002/0050/0054

AUTHOR: Chernova, G. G.; Kirzon, M. V.; Safonov, V. A.; Lebedinskiy, A. B. ¹⁴
B

TITLE: The role of reflexes from the sinocarotid zone in the regulation of respiration under excessive intrapulmonary oxygen tension

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 59, no. 2, 1965, 50-54

TOPIC TAGS: respiration, respiratory system, neurophysiology

ABSTRACT: The manner in which occlusion of the common carotid arteries and denervation of the sinocarotid area affect respiration in cats under excessive intrapulmonary tension (30 mm Hg) was studied. Occlusion of the common carotid arteries caused a reduction in the respiration retention occurring in response to the creation of excessive intrapulmonary oxygen tension, while denervation of the sinocarotid area caused an increase in this tension. In the case of increased pulmonary oxygen tension, occlusion of the common carotid arteries and denervation of the sinocarotid zone had no appreciable effect on the time of respiratory arrest.

Card 1/2

L 39693-65

ACCESSION NR: AP50066~~86~~86

It was concluded that the reflexes from the sinocarotid area had an activating effect on respiration under conditions of excessive intrapulmonary tension. Orig. art. has: 2 figures, 1 table. 0

ASSOCIATION: Kafedra fiziologii zhivotnykh Moskovskogo gosudarstvennogo universiteta imeni M. V. Lomonosova (Department of Physiology of Animals, Moscow State University)

SUBMITTED: 16May64

ENCL: 00

SUB CODE: LS, PH

NO REF SOV: 005

OTHER: 005

Card 2/2 MB

LEBEDINSKY, A. F.

"A. M. Zimkina & A. F. Lebedinsky: Variations of the Mechanism of Pupillary Reaction in Various Species of Animals." Received on March 15, 1945. (p. 305)

SC: Journal of General Biology, Vol. VI, contents of the issues 1-6, for 1945. No. 5

LEBEDINSKIY, A.I.; KOSILOV, S.A., prof.; SOLOV'YEVA, L.M., kand.med.nauk

On the night shift. Zdorov'ye 5 no.12:21-22 D '59. (MIRA 13:4)

1. Starshiy svarshchik staleprokatnogo zavoda imeni Dzerzhinskogo,
Odessa (for Lebedinskiy).
(NIGHT WORK--HYGIENIC ASPECTS)

LEBEDINSKIY, A. I.

"Equation of the Transport of Energy by Convection Currents in Stars," Dok. AN, 23
No. 5, 1939.

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"On the Radioactive Equilibrium of the Earth Atmosphere," Dok. AN, 22, No. 6, 1939.

1. LEBEDINSKIY, A. I.

2. USSR (600)

"Rotation of the Sun," Astron. Zhur., 18, No 1, 1941 Astronomical observatory
Leningrad State University (submitted Jun 1940)

9. [REDACTED] Report U-1518, 23 Oct 1951

LEBEDINSKIY, A. I.; ZHURAVLEV, S. S.

"Photoelectric photometer for Sun's surface," Astron. Zhur., 18, Nos 4-5, 1941.

Report U-1518, 23 Oct 1951

PA 4T71

LEBEDINSKY, A. I.

1945

USSR/Sunspots
Magnetism, solar

"The Magnetic Field in Sunspots," L. E. Gurevich, A. I. Lebedinsky, 3 pp

"CR Acad Sci" Vol XLIX, No 2

Theory of sunspot magnetic phenomenon, which assumes that gas in sunspots flows in to the axis of symmetry of the spot in some regions, and away from it in others, which circulation of a conductive gas leads to the formation of a strong magnetic field by self-excitation from an initially weak field, i.e., the general magnetic field of the sun.

Geophysical & Extraterrestrial
Phenomena

5379:538.12 1761
Magnetic Field of Sunspots: Part 1.
Gurevich & A. Lebedinsky, (*J. Phys., U.S.S.R.*,
1946, Vol. 10, No. 4, pp. 327-332). The magnetic
field of sunspots is explained in terms of a self-
excitation process related to the hydrodynamic
circulation inside a sunspot. Calculations on this
hypothesis give fields of several thousand gauss
in the outer layers of sunspots and also show that
the magnetic fields in the components of bipolar
groups of sunspots are oppositely directed.

LEBEDINSKIY, A.

"Magnetic Field of Sunspots, II," Jour Phys, USSR, X, No. 5, 1946. Leningrad State U, -1946-. 6pp.

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"Magnetic Field of Sun Spots. I, " Zhur. Eksper. i Teoret. Fiz., 16, No. 9, 1946. Leningrad State Univer., -1946-

LEBEDINSKIY, A. I.

[Lebedinsky, A. I. Structure of envelopes of novae. Astr. J. Soviet Union [Astr. Zhurnal] 23, 15-30 (1946). (English. Russian summary) [MF 16956]

The hydrodynamical equations of an extended spherical stellar atmosphere are investigated. These equations differ from the usual equations of gas dynamics in that in the equation of motion, the acceleration due to radiation pressure must be included and also the variation of temperature must be allowed for in accordance with the solution of radiative equilibrium [N. A. Kosirev, Monthly Not. Roy. Astr. Soc. 94, 430-443 (1934), equation (8); S. Chandrasekhar, ibid. 444-458 (1934), equation (51)].

The author first shows that under certain conditions the equations admit a "characteristic surface" moving with velocity $w = \pm (RT/\mu)^{1/2}$ (R the gas constant, μ the mean molecular weight, T the temperature). He next investigates the form of the solution in the neighborhood of such a characteristic surface and shows that the structure of such a "quasi-stationary" wave can be reduced to the solution z of an equation of the form $(z^2 - z_0^2)\partial z/\partial y + 4z^3 + z^2 - \beta z = 0$, $\beta = \text{constant}$, which tends to z_0 as $y \rightarrow 0$. Here z is proportional to $\rho T^{-1/2}$ and $y = (T - T_0)/T_0$, where T_0 is the temperature on the characteristic surface. The equation is solved and the structure of envelopes of novae is interpreted in terms of the solutions. S. Chandrasekhar.

Source: Mathematical Reviews,

Vol. 5, No. 3

Sm. 1946

LEBEDINSKIY, A. I.

PA 16T90

USSR/Spectroscopic Equipment
Solar phenomena

Mar 1947

"In a Spectroscopic Laboratory," A. I.
Lebedinskiy, Yu. V. Timoreva, 2 pp

"Vestnik Leningradskogo Universiteta" No 3

Since 1944 work carried out in completing the Spectrographic Laboratory of the Institute of Astronomy. Installation of a solar telescope 20 meters, to be ready for use by the end of 1947. In 1945 expedition went to Babayev to observe the solar eclipse on 9 Jul 1945, as well as to Brazil to observe the eclipse 20 May 1947. At present there is under construction a set of 8 spectrographs for the purpose of studying the polarization of the solar corona.

16T90

GUREVICH, L.E.; LEBEDINSKIY, A.I.

Theory of outburst of novae. Zhur.eksp.i teor.fiz. 17 no.9:792-806 '47.
(MLBA 6:7)

1. Leningradskiy universitet.

(Stars, New)

LEBEDINSKY, A. I.

PA 8T80

USSR/Nuclear Physics
Stellar perturbations

Apr 1947

"Explosions in Stars, Resulting from Nuclear Reactions, as a Possible Cause for the Outbursts of Novae and Supernovae," L. Z. Gurevich, A. I. Lebedinsky, 3 pp

"CR Acad Sci" Vol LVI, No 1

An attempt to explain the outbursts of stars like U Geminorum in terms of thermal explosions brought on by nuclear reactions, as against the hypothesis of gravitational collapse.

8T80

LEBEDINSKIY, A. I.

Apr 47

USSR/Stellar Perturbations
Nuclear theory

"Peripheral Explosions in Stars as a Result of Nuclear Reactions," L. E. Gurevich, A. I. Lebedinskiy, 4 pp

"CR Acad Sci" Vol LVI, No 2

Novae and supernovae previously explained on the basis of nuclear reactions. Article gives the conditions necessary for peripheral explosions to occur. Differential and integral equations describing conditions given. Fifteen nuclear reactions ($H_1 + H_2 = He_3$, etc.) are given.

PA 11T80

LEBEDINSKIY, A. I.

"The Pulsations of Cepheids. I & II Astron. Zhur. XXVI, No. 2 & 3, 1949. (Leningrad State Univ.) -cl949-.

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Gurevich i Lebedinsky, A.I.

33864. Problemy Sovryemyennoy Kosmologii. (Izlozhyeniye Doklada Na Tyeorye T. Konfyeryentsii, Lyeningr. OtdOniya VAGO Po Idyeol. Voprosam V Astronomii. Ryek. 1948 G.)

SO: Letopis' Zhurnal'nykh Statey, Vol. 46, Moskva, 1949.

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Lebedinskiy, A. I. - "The structure of the cover of new stars," Trudy Yubileynoy nauch.
sessii (Leningr. gos. un-t), Sektsiya matem. nauk, Podseksiya astronomii, Leningrad,
1968, v. 12-24

SO: U-3600, 10 July 53, (L-topis 'Zhurnal 'nykh Statey, No.6, 1949).